

REMARKS

Reconsideration of the above-identified application in view of the foregoing amendments and following remarks is respectfully requested.

A. **Status of the Claims and Explanation of Amendments**

Claims 6, 7 and 9-15 were pending in this application. By this paper, claim 6 is amended to recite, *inter alia*, “enlarging part of the first reduced image . . . so as to select a part of the second reduced image data and to display the selected part of the second reduced image data.” Support for the amendment can be found throughout Applicant’s original specification, including for example, Figures 4 and 8. Also, claim 6 is amended to recite generating and storing reduced image data “in an imaging process of the original image data.” Support for the amendment can be found throughout Applicant’s original specification, including for example, Figure 2.

As to the merits, claims 6, 7 and 9-15 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent 6,734,909 (“Terane”) in view of U.S. Patent 6,674,472 (“Tsutsui”) and further in view of U.S. Patent Application Publication 2003/0123696 (“Matsumoto”)

B. **Claims 6, 7 and 9-15 are Patentably Distinct from Terane, Tsutsui and Matsumoto.**

The rejections of claims 6, 7 and 9-15 are respectfully traversed. As explained more fully below, the requirements for such rejections are not met. In particular, Terane, Tsutsui and Matsumoto do not teach, disclose or suggest “enlarging part of the first reduced image . . . so as to select a part of the second reduced image data and to display the selected part of the second

reduced image data". Nor do Terane, Tsutsui and Matsumoto do not teach, disclose or suggest "an image processing unit which generates first reduced image data, second reduced image data for enlargement display process of enlarging and displaying a part of the first reduced image". Finally, Terane, Tsutsui and Matsumoto do not teach, disclose or suggest generating and storing reduced image data "in an imaging process of the original image data."

1. Terane, Tsutsui and Matsumoto do not teach, disclose or suggest "enlarging part of the first reduced image . . . so as to select a part of the second reduced image data and to display the selected part of the second reduced image data"

Applicant's claim 6 recites:

An image pickup apparatus comprising:

an image pickup unit which obtains original image data;

an image processing unit which generates, in an imaging process of the original image data, first reduced image data, second reduced image data for enlargement display process of enlarging and displaying a part of the first reduced image data and thumbnail data from the original image data obtained by said image pickup unit, wherein the second reduced image data is larger than the first reduced image and the first image data is larger than the thumbnail data;

an image file generation unit which generates, in an imaging process of the original image data, an image file by storing the original image data, the first reduced image data corresponding to the original image data, the second reduced image data corresponding to the original image data and the thumbnail data of the original image data into one image file;

an interface unit which writes the image file generated by said image file generation means in a recording medium and reads out the image file from the recording medium;

a display unit which displays the first reduced image data and the second reduced image data stored in the image file read out from the recording medium by said interface unit; and

a control unit which controls said display unit, in response to an instruction of enlarging part of the first reduced image data displayed by said display unit, so as to select a part of the second reduced image data and to display the selected part of the second reduced image data stored in the image file which stores the first reduced image data and is read out from the recording medium by said interface unit instead of the first reduced image data.

Terane is directed towards an imaging device in which the access time to view sequential images is shortened. [Terane at col.1 lns.50-56]. For example, such a system could be useful to sequentially view the images stored within a digital camera on a built in display. [Terane at col.1 lns.23-29]. Terane makes use of thumbnail images, which can be displayed in a short time. While the user views the thumbnail image, the full image, which requires a longer time to enter the display memory, is read and subsequently displayed when fully loaded. Should a different thumbnail be selected before the full image enters the memory, the reading of the full image is discontinued, the new thumbnail is displayed, and reading of the full image corresponding to the new thumbnail begins. [Terane at col.2 ln.57 – col.3 ln.8].

The Office Action alleged that Terane disclosed displaying second reduced image data in response to an instruction of enlarging first reduced image data, citing Figures 2A through 2C of Terane. [8/27/08 Office Action at p.3]. In addition, the February 26, 2008 Office Action stated that Terane discloses “enlargement display processing of the displaying part of the first reduced image data (Full Image – Figure 2A) as an enlarged part of the thumbnail data (thumbnail data – figs. 2A-2C).” [2/26/08 Office Action at p.3].

Applicant respectfully disagrees, noting the figures cited to correspond to “part of the first reduced image data” is an entire image and not a “part.” Terane’s figures 2A and 2B (of which 2A is an enlargement of) are shown below:

FIG. 2A

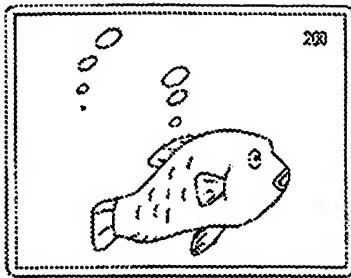
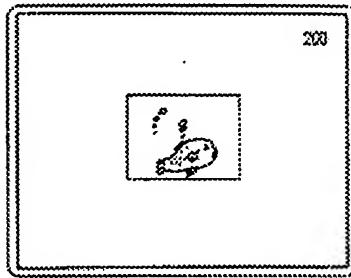


FIG. 2B



As claim 1 recites enlargement display of "part of the first reduced image data," Applicant respectfully asserts that Terane does not disclose this feature, as Terane discloses enlargement of the entire image.

Tsutsui is directed towards a digital camera and method for displaying pages containing a plurality of thumbnail images. [Tsutsui at col.1 ln.65- col.2 ln.2]. The user may select the number of thumbnail images displayed per page, after which Tsutsui determines the total number of pages needed to display all thumbnails and processes the individual thumbnails to form composite grid/matrix pages containing the designated number of thumbnails per page. [Tsutsui at col.5 ln.59 to col.6 ln.53].

Tsutsui teaches that the size of images must be adjusted to fit the number of spaces in a matrix. For example given a display screen of a fixed size, there is less screen area per image if a 3x3 (9 thumbnail images) matrix is employed compared to a 2x2 (4 thumbnail

images) matrix. [Tsutsui Figure 9A and 9B]. Thus for an image to be properly displayed in a matrix, it may need to be resized. However, Tsutsui discloses that the mechanism to achieve this is “subtract[ing] a part of image pixels of each thumbnail image stored in the memory card 9 at a predetermined interval.” [Tsutsui col.6 lns.47-51]. Thus Tsutsui only discusses reduction of images rather than enlargement. In addition, the reduction process of Tsutsui operates on the image as a whole rather than a part.

Matsumoto is directed towards a process for adding digital watermarks to image files. Matsumoto teaches composing a file containing multiple resolutions of a single image. [Matsumoto ¶0073]. In addition, this image data at various resolutions is broken down into “tiles.” *Id.* at ¶0074. When the watermark is inserted into the image, it is done for each of the tiles. *Id.* at ¶0143. However, applicant’s review of Matsumoto finds no discussion of enlargement display.

Accordingly, as Applicant cannot find “enlarging part of the first reduced image . . . so as to select a part of the second reduced image data and to display the selected part of the second reduced image data,” of claim 6 in Terane, Tsutsui or Matsumoto, at least independent claim 6 its dependent claims 7 and 9-15 are respectfully asserted to be in condition for allowance.

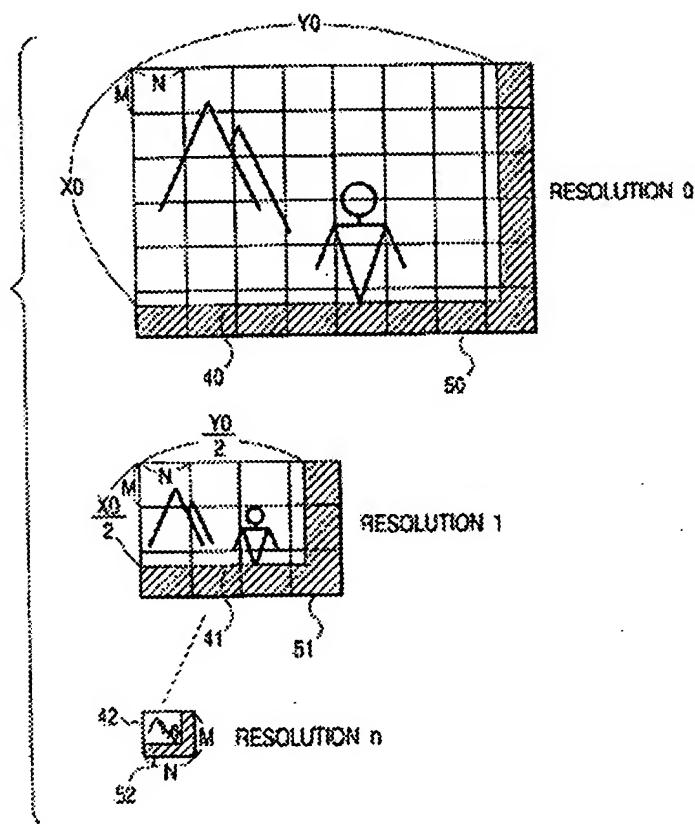
2. Terane, Tsutsui and Matsumoto do not teach, disclose or suggest “an image processing unit which generates first reduced image data, second reduced image data for enlargement display process of enlarging and displaying a part of the first reduced image.”

In addition, as a second ground of distinction, Applicant believes the current claims are patentably distinct over the cited references, because Terane, Tsutsui and Mastumoto fail to describe an “an image processing unit which generates first reduced image data, second

reduced image data for enlargement display process of enlarging and displaying a part of the first reduced image," as recited in claim 6.

As discussed above, both Terane and Tsutsui appear to operate on image as a whole rather than parts of an image. *See* discussion *supra* at p.7-8. Furthermore, although Matsumoto does generate and divide images of various resolutions into tiles, there do not appear to be any correlation of the tiles made at one resolution to the next. *See* Matsumoto Figure 5(reproduced on the following page).

FIG. 5



Referring to Figure 5, if a particular part of the RESOLUTION 1 image were to be selected and enlarged (ie. a specific tile were chosen), there is not a corresponding part in the RESOLUTION

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0 image to display. The tile division of the RESOLUTION 0 image does not track the pattern of the RESOLUTION 1 image. Therefore Matsumoto does not teach an image processing unit that generates image data which facilitates “enlargement display process of enlarging and displaying a part of the first reduced image.”

Accordingly, as Applicant cannot find “an image processing unit which generates first reduced image data, second reduced image data for enlargement display process of enlarging and displaying a part of the first reduced image,” as recited in claim 6 in Terane, Tsutsui or Matsumoto, at least independent claim 6 its dependent claims 7 and 9-15 are respectfully asserted to be in condition for allowance.

3. Terane, Tsutsui and Matsumoto do not teach, disclose or suggest generating and storing reduced image data “in an imaging process of the original image data.”

In one embodiment, applicant's claimed apparatus is arranged to generate, in an imaging process of an original image data, thumbnail data and first and second reduced image data to store them in a same image file as the original image data, and effect control in response to an instruction to enlarge the displayed first reduced image data reproduced from the image file so that a part of the second reduced image data is selected and the selected part of the second reduced image data stored in the image file which stores the first reduced image data and is read out from the recording medium, is displayed instead of the first reduced image.

It is believed that the above-described feature is not taught from each of the cited references of Terane, Tsutsui and Matsumoto. Each of references of Terane and Tsutsui discloses generating images of different sizes when an image stored in a memory is reproduced and displayed and therefore does not disclose or suggest generating, “in the imaging process of the

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original image," the reduced images of different sizes to store them in the same image file as the original image.

Specifically, as discussed above, the reference of Terane discloses displaying a full image shown in Figure 2A when an image recorded on a memory card is reproduced and displayed. However, as apparent from column 5 lines 4-12, this reference generates the image of Figure 2B by reducing the full image recorded on the memory card and thus fails to teach to generate the image of Figure 2B in the imaging process of the original image.

The reference of Tsutsui discloses in Figures 9A and 9B display of four or nine thumbnail images. However, as also apparent from a flowchart shown in Figure 6, those thumbnail images are generated when an image recorded on the memory card is reproduced. This reference therefore also fails to teach to generate the reduced images of different sizes in the imaging process of the original image.

The reference of Matsumoto discloses to store image data of plurality of resolutions into a single file. However, this reference is silent on a purpose of use of those image data and even an image pickup unit itself. The reference of Matsumoto also fails to teach to generate the reduced images of different sizes in the imaging process of the original image.

In view of the foregoing, the cited references of Terane, Tsutsui and Matsumoto, even when each taken alone or in combination, do not teach the present invention recited in the amended independent claim 6 and its dependent claims.

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CONCLUSION

For the above-stated reasons, this application is respectfully asserted to be in condition for allowance. An early and favorable examination on the merits is requested. In the event that a telephone conference would facilitate the examination of this application in any way, the Examiner is invited to contact the undersigned at the number provided.

THE COMMISSIONER IS HEREBY AUTHORIZED TO CHARGE ANY ADDITIONAL FEES WHICH MAY BE REQUIRED FOR THE TIMELY CONSIDERATION OF THIS AMENDMENT UNDER 37 C.F.R. §§ 1.16 AND 1.17, OR CREDIT ANY OVERPAYMENT TO DEPOSIT ACCOUNT NO. 13-4500, ORDER NO. 1232-5158.

Respectfully submitted,
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